

In the claims:

Please amend the claims as follows.

1. (Cancelled)

2. (Currently Amended) The process according to claim-47, wherein the power applied to the gas is in the range from 2.9kW to 3.2kW.

3. (Currently Amended) The process according to claim-47, wherein the step of generating the plasma includes:

applying a first radio-frequency power to the gas by means of a first power source,
and

applying a second radio-frequency power to the gas by means of a second power source, a ratio between the first power and the second power being in the range from 2.1 to 2.5.

4. (Original) The process according to claim 3, wherein the ratio between the first power and the second power is in the range from 2.2 to 2.4.

5. (Currently Amended) The process according to claim 47, wherein the step of providing the gas includes providing each precursor component at a flow rate in the range from 80% to 95% of a corresponding rated value supported by the reactor.

6. (Currently Amended) The process according to claim 47, further including the step of cooling the substrate during the deposition of the layer of Silicon Nitride.

7. (Currently Amended) A high-density plasma process for depositing a layer of Silicon Nitride on a substrate in a plasma reactor, the process including the steps of:

providing a gas including precursor components of the Silicon Nitride,
generating a plasma by applying a radio-frequency power to the gas, and
the plasma reacting with the substrate to deposit the layer of Silicon Nitride.

wherein the power applied to the gas is in the range from 2.5kW to 4kW, and
wherein the process further includes ~~The process according to claim 1, further including the~~
steps before the deposition of the layer of Silicon Nitride of:

providing a further gas including Oxygen,
generating a further plasma from the further gas, and
heating up the substrate by means of the further plasma, thereby generating a first
oxide liner on the substrate.

8. (Original) The process according to claim 7, wherein the step of generating the further plasma includes applying the radio-frequency power to the further gas, the radio-frequency power being not removed between the heating up of the substrate and the deposition of the layer of Silicon Nitride.

9. (Original) The process according to claim 7, further including the step of cooling a surface of the substrate that is not exposed to the further plasma during the heating up of the substrate.

10. (Currently Amended) The process according to claim ~~4~~7, further including the steps after the deposition of the layer of Silicon Nitride of:

providing a still further gas including Oxygen,
generating a still further plasma from the still further gas to de-chuck the substrate from an electrostatic chuck, thereby generating a second oxide liner on the layer of Silicon Nitride.